

# Preventing Pipeline Oil Spills In the Pacific OCS Region

Presented by  
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Prevention First 2006

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MMS, part of the U.S. Department of the Interior, oversees 1.76 billion acres of the Outer Continental Shelf, managing offshore energy and minerals while protecting the human, marine, and coastal environments.

# Pipelines – Preventing Oil Spills

- Why Pipeline Inspections?
- Statistics – Causes of Pipeline Failures
- Overview of Pacific OCS Region Pipeline Inspection Program
- Type of Pipeline Inspections and Tools
- Current Status of Inspections
- Continued Prevention of Oil Spills

# Why Pipeline Inspection Program?



# How does this relate to offshore?

- Media attention on industry
- Corrosion can be a problem in offshore pipelines

# Why Pipeline Inspection Program?

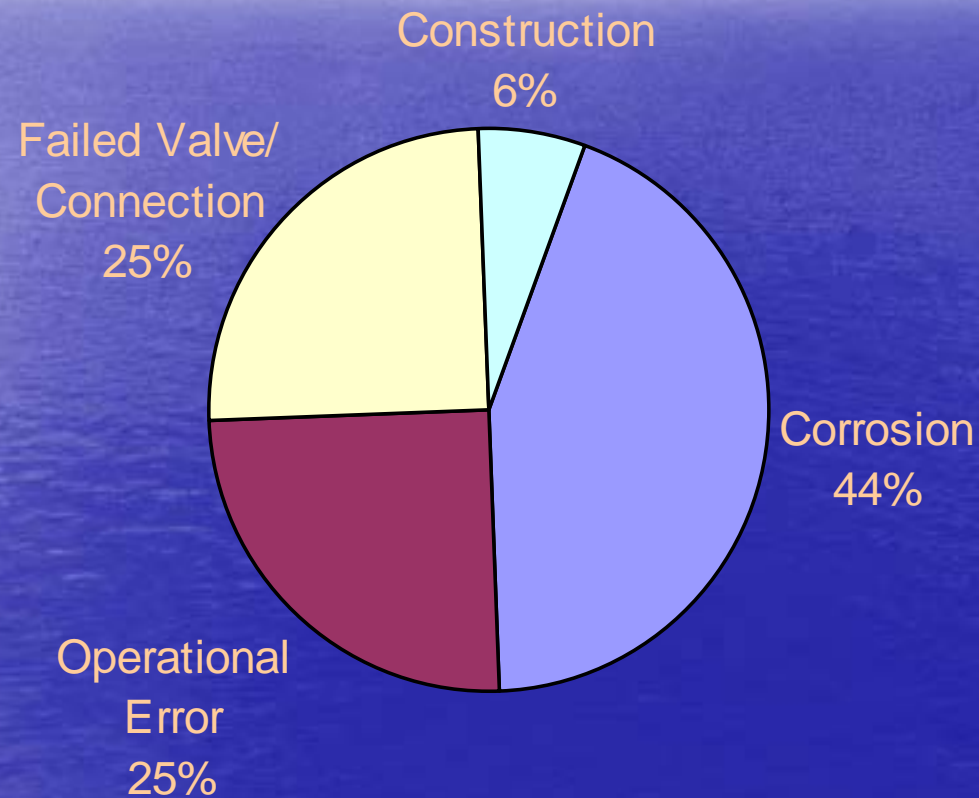


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# Distribution by Cause of Failure

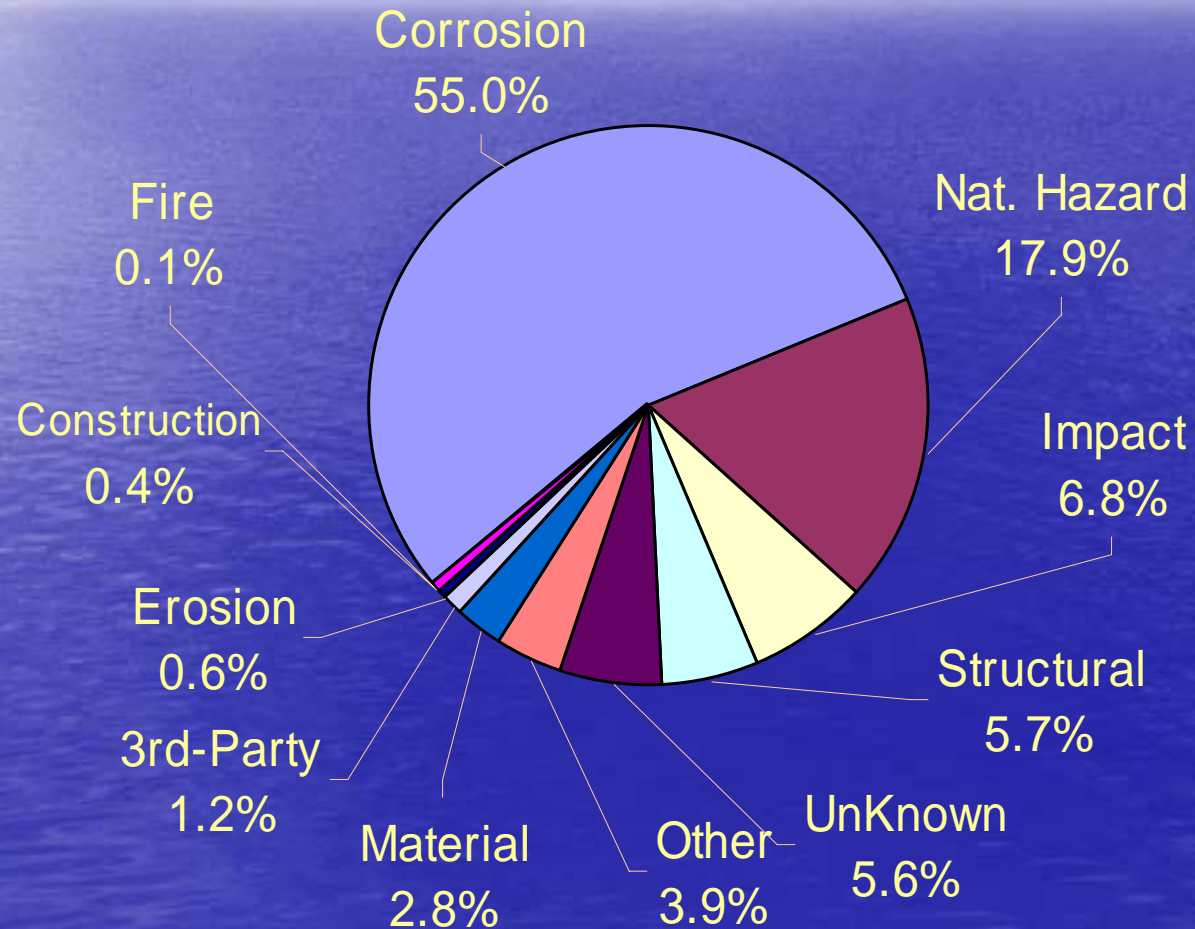
All Pipelines in Pacific Region in last 12 yrs





# GOM Region Distribution by Cause of Failure

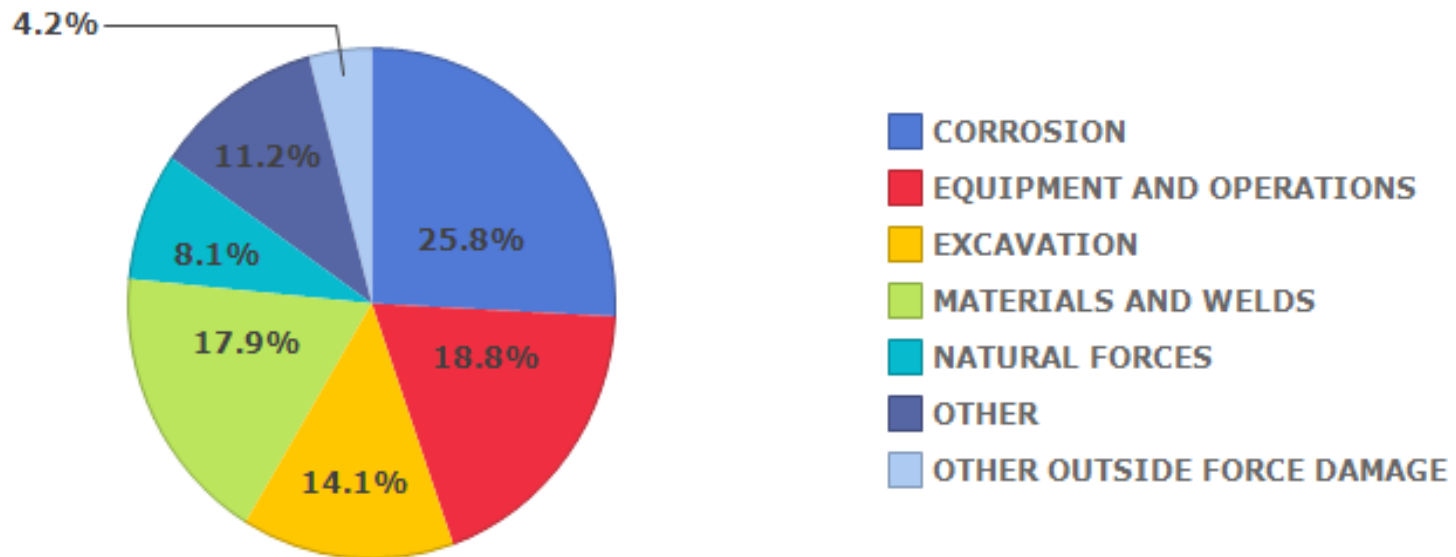
(Not including 2005)



# Dept. of Transportation

## Pipelines and Hazardous Material Safety Administration

National Hazardous Liquid Failure Causes 2002-2005



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# Overview of Inspection Program

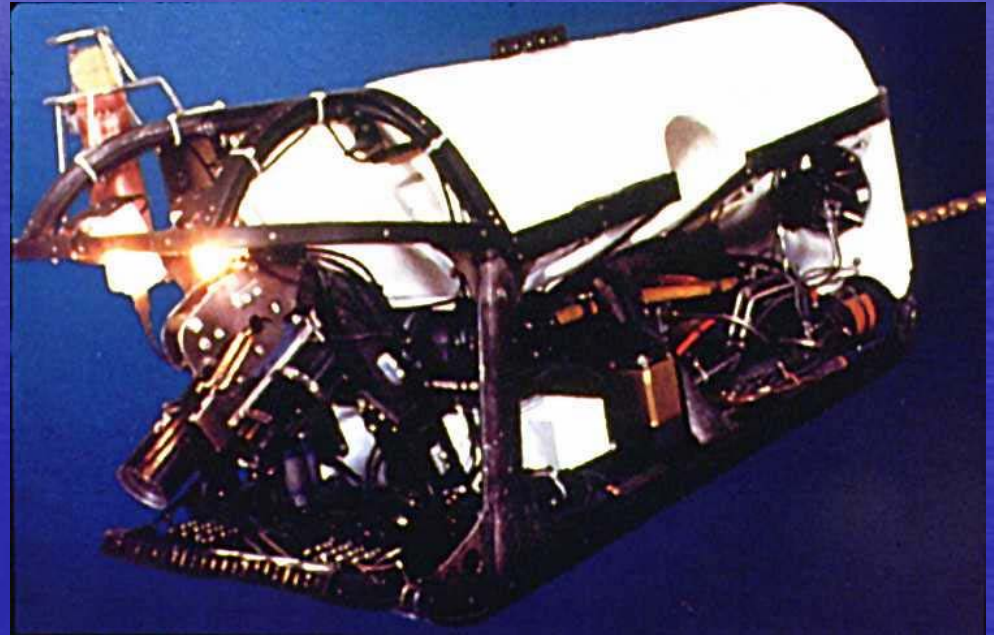
- In 1990, MMS Pacific OCS Region pipeline inspection program was established in the Pacific OCS Region
- In general, external and internal inspections every other alternating year
- Cathodic Protection (CP) survey every year
- Remediation plan must be submitted for safety or fishing hazard

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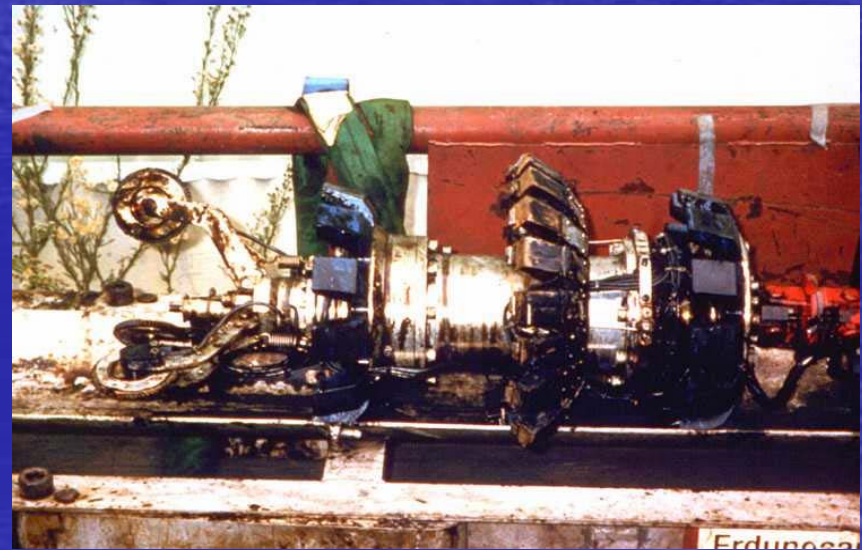
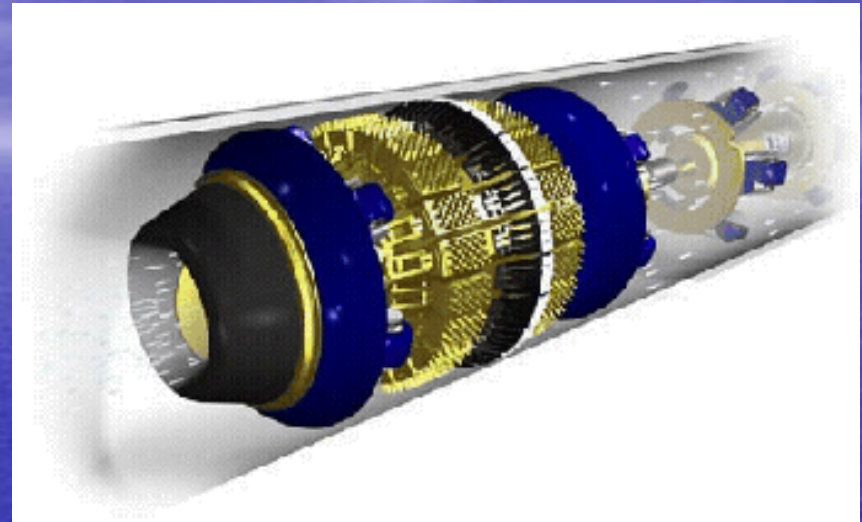
# Type of Pipeline Inspections and Tools

- External inspections conducted by remote operated vehicle or side scan sonar
- Used to detect potential external problems including spans, debris, coating damage



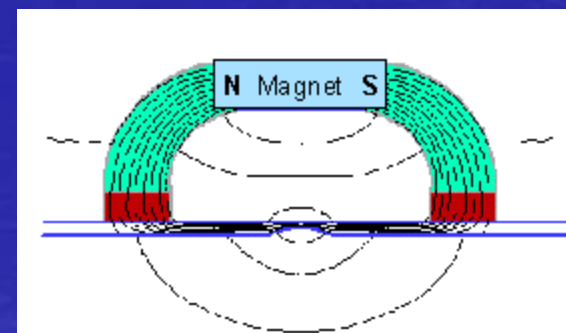
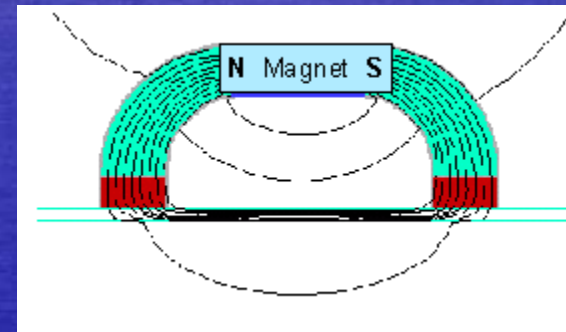
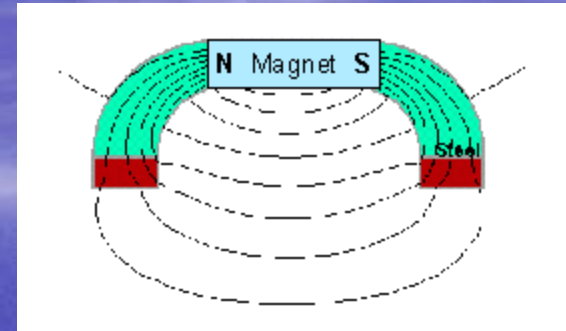
# Type of Pipeline Inspections and Tools

- Internal inspections conducted by intelligent pigs, a.k.a. "smart" pigs
- Used to detect wall loss (corrosion) and some dents

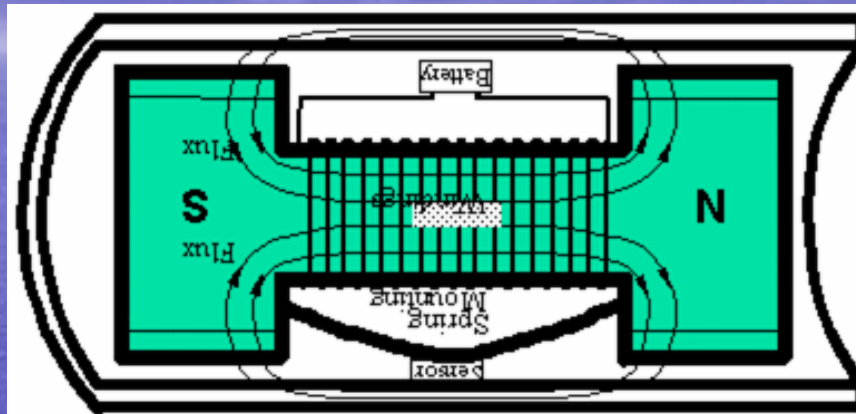


# How MFL Works?

- Flux Field around a magnet
- Flux field around a magnet in contact with a pipe
- Flux field around a magnet in contact with a pipe with a defect







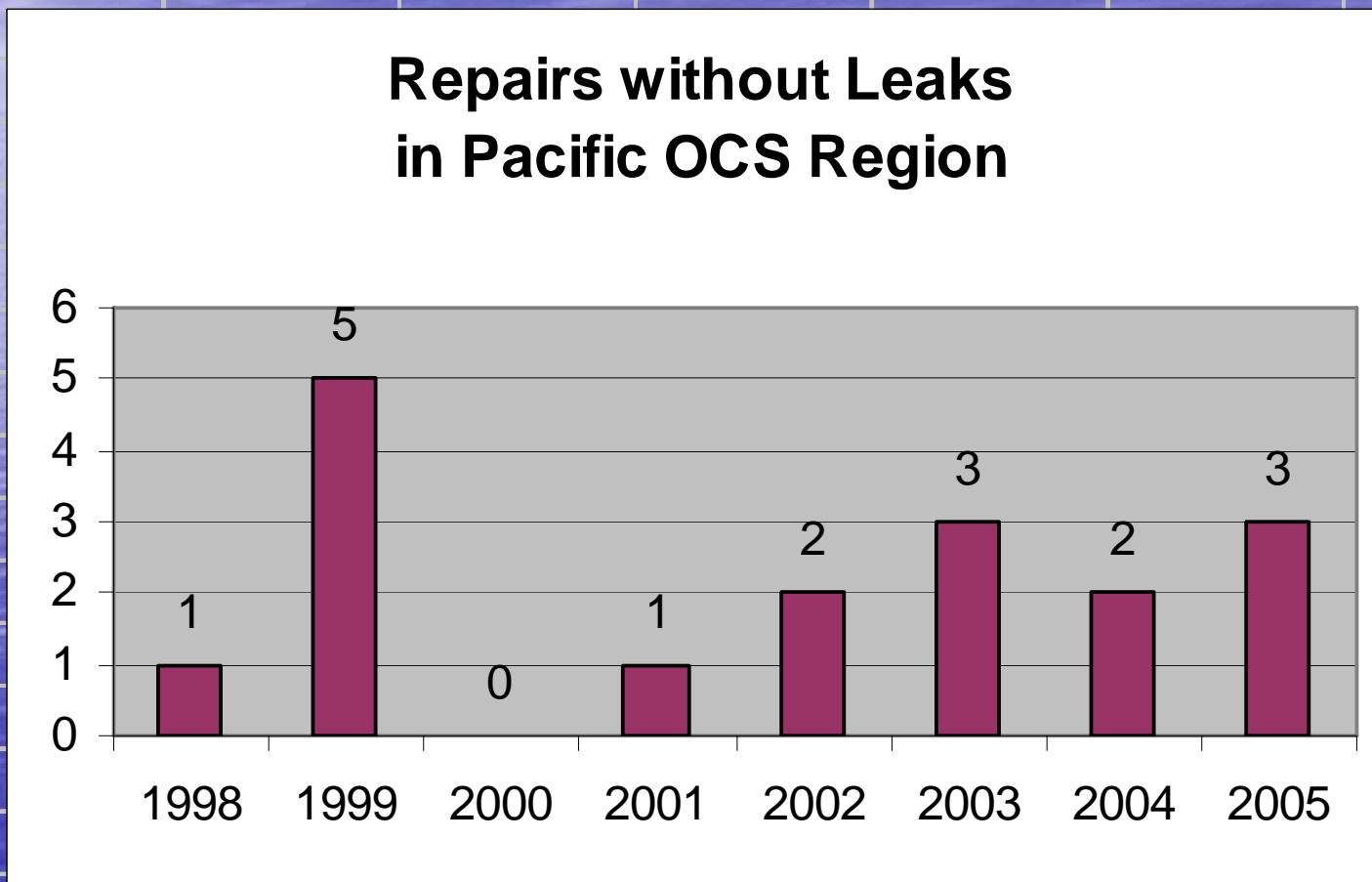
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# Current Pipeline Inspection Status

- All oil and gas pipelines externally inspected
- All oil and gas pipelines internally inspected except one pipeline due to asphaltene build-up

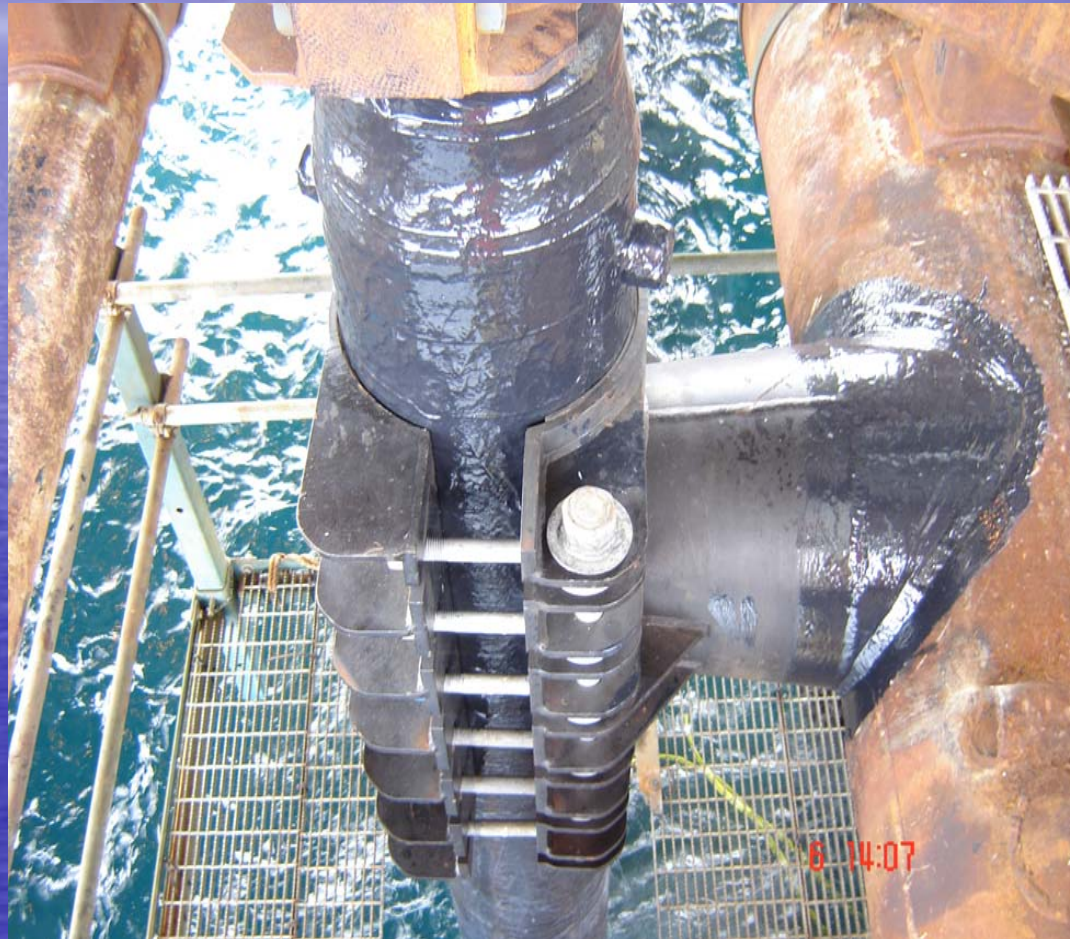
# Success of the Program



# External Corrosion



# Repair of Pipeline Riser



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# Continued Prevention of Oil Spills

- Maintenance
- Pipeline cleaning program
- Corrosion Monitoring program that includes:
  - Evaluating inhibitor use
  - Testing product, water and pigging debris
  - Corrosion coupons
  - Internal and External inspections
- Continuously evaluate effectiveness of Corrosion Monitoring program



# Agency & Company Cooperation

- MOA between State & Federal agencies
- Joint Inspections
- Information sharing



# In Closing

Working together and having a good maintenance, corrosion monitoring and inspection programs can help prevent pipeline oil spills